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Specification for  
**Nails**

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Part 3. Aluminium nails

Confirmed  
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The following BSI references relate to the work on this standard:  
Committee references HIB/10. HIB/10/1 Draft for approval 73/10458

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*British Hardware Federation	Institution of Municipal Engineers
British Lock Manufacturers' Association	Metal Window Federation of Great Britain
British Plastics Federation	Metropolitan Police
British Steel Industry	*National Building and Allied Hardware Manufacturers' Federation
*Copper Development Association	*National Federation of Building Trades Employers
Department of the Environment	Royal Institute of British Architects
*Department of the Environment, Building Research Establishment	Royal Institution of Chartered Surveyors
Greater London Council	Zinc Development Association
Guild of Architectural Ironmongers	

The Government department and scientific, industrial and professional organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

Aluminium Federation	Nail Industry
Amalgamated Society of Woodworkers	National Federation of Roofing Contractors
British Furniture Manufacturers' Federated Association	Steel Nail Association
Department of the Environment, Building Research Establishment (Princes Risborough Laboratory)	Timber Research and Development Association
Engineering Industries' Association	Wire Products Association
Institute of Iron and Steel Wire Manufacturers	Individual manufacturers

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Amendments issued since publication

Amd. No.	Date of issue	Text affected

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## Foreword

This British Standard is published in the following separate Parts:

- Part 1. Steel nails
- Part 2. Copper nails
- Part 3. Aluminium nails

This Part of the standard has been prepared under the authority of the Hardware and Ironmongery Industry Standards Committee. It is expressed solely in metric units and relates to 10 types of aluminium nails at present in common use for general purposes.

For the benefit of those not conversant with metric diameters of nails, each table in this standard includes a separate column showing the nearest former standard wire gauge (s.w.g.) numbers. These do not form part of the specification. Their inclusion is only intended to be temporary and is planned to be reconsidered by 31 December 1976.

Inch equivalents, if required, may be determined from BS 350 'Conversion factors and tables'.

This Part of the standard replaces BS 1202 : Part 3 : 1962 which was prepared at the request of nail users and manufacturers, with the approval of the Code of Practice Drafting Committees responsible for CP 142, 'Slating and tiling' and CP 143, 'Sheet roof and wall coverings'. In this new edition certain sizes have been added and others deleted.

*Certification.* Attention is drawn to the certification facilities described on the inside back cover of this standard.

British Standard Specification for

# Nails

## Part 3. Aluminium nails

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### 1. Scope

1.1 This Part of this British Standard specifies requirements, including dimensions and finish for the following types of aluminium nails.

NOTE. The nearest former s.w.g. numbers are included in a separate column in each table for convenience only. They do not form part of the specification.

- (1) Round plain head nails
- (2) Round lost head nails
- (3) Clout, slate and tile nails
- (4) Extra large head felt nails
- (5) Nipple head roofing nails
- (6) Panel pins
- (7) Gimp pins
- (8) Tile pegs, sharp and round point
- (9) Annular ring shank flat head nails
- (10) Helical threaded shank flat head nails

1.2 The types of nail are illustrated in the diagrams accompanying Tables 1 to 10.

NOTE. The title of the British Standard referred to in this standard is given on the inside back cover.

### 2. Materials

2.1 Aluminium round wire nails shall be made from one of the alloys HG 9 or HG 20 specified in BS 1475.

2.2 For nail manufacture, alloy HG 9 shall have a tensile strength not less than 280 N/mm<sup>2</sup> and alloy HG 20 not less than 370 N/mm<sup>2</sup>.

2.3 Nails thinner than 2 mm diameter shall be made only from HG 20 material.

### 3. Workmanship

3.1 Aluminium nails shall be straight and true in shape, free from excessive burrs and flashes which may be detrimental to their use.

3.2 The heads of nails when formed shall be of a design and thickness to withstand normal driving.

### 4. Finish

The finish of aluminium nails shall be as manufactured unless otherwise agreed between purchaser and supplier. The finish shall be clean and free from excessive oxidation.

### 5. Dimensions and tolerances

The dimensions of aluminium nails shall be in accordance with Tables 1 to 10, subject to the following tolerances:

- (1) *Head diameter*:  $\pm 5\%$  except for extra large head felt nails, which shall have a diameter of 11.00 mm.
- (2) *Shank diameter*: when diameter,  $D$ , is less than 2.65 mm,  $\pm 0.03$  mm; when diameter,  $D$ , is 2.65 mm and more,  $\pm 0.05$  mm.
- (3) *Length*: when diameter,  $D$ , is less than 2.65 mm, 0.5 mm; when diameter,  $D$ , is 2.65 mm and more,  $\pm 0.8$  mm.

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## **6. Inspection**

If the purchaser wishes to inspect the nails at the supplier's works, he shall notify the supplier at the time of placing the order.

## **7. Weights**

The approximate number of aluminium nails per kilogram is given, for general guidance only, in Tables 1 to 10.

## **8. Designation for ordering**

**8.1** When designating aluminium nails in an enquiry or an order, the following information shall be given:

- (1) Quantity required by weight
- (2) Type
- (3) Length in millimetres
- (4) Diameter in millimetres
- (5) British Standard number

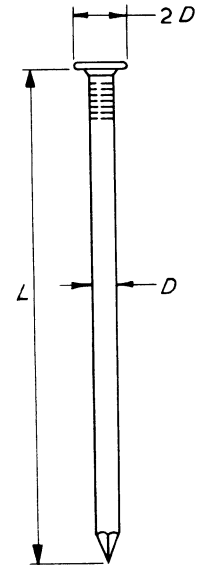
**8.2** Example: 25 kg nipple head roofing nails, 50 mm × 4.50 mm, to BS 1202 : Part 3.

## **9. Certificate of compliance**

If required by the purchaser, the supplier shall certify that the nails comply with the requirements of this standard.

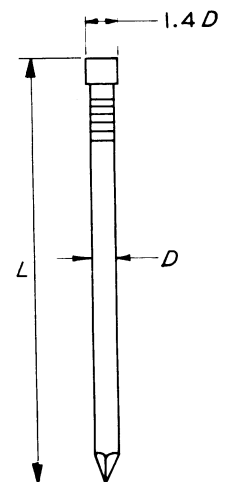
**Table 1. Dimensions and approximate count of round plain head nails**

Length <i>L</i>	Shank diameter <i>D</i>	Approx. no. of nails per kg	Nearest former s.w.g.
mm	mm		
115	5.00	159	6
100	5.00	184	6
100	4.50	215	7
90	4.50	246	7
90	4.00	296	8
75	4.00	338	8
75	3.75	431	9
75	3.35	543	10
65	3.75	490	9
65	3.35	644	10
65	3.00	770	11
60	3.35	714	10
60	3.00	868	11
50	3.35	812	10
50	3.00	952	11
50	2.65	1232	12
45	2.65	1428	12
45	2.36	1792	13
40	2.65	1610	12
40	2.36	2100	13
40	2.00	2716	14
30	2.00	3276	14
30	1.80	2948	15
25	2.00	4004	14
25	1.80	4816	15
25	1.60	5936	16
20	1.60	7588	16



**Table 2. Dimensions and approximate count of round lost head nails**

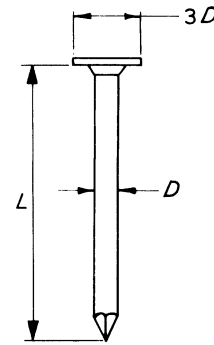
Length <i>L</i>	Shank diameter <i>D</i>	Approx. no. of nails per kg	Nearest former s.w.g.
mm	mm		
75	3.75	448	9
65	3.35	672	10
60	3.35	756	10
50	3.35	860	10
50	3.00	1008	11
40	2.64	1390	12
40	2.36	2128	13



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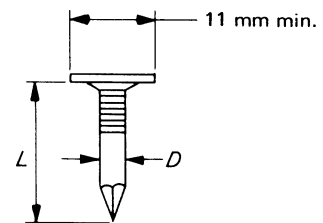
**Table 3. Dimensions and approximate count of clout, slate and tile nails**

Length <i>L</i>	Shank diameter <i>D</i>	Approx. no. of nails per kg	Nearest former s.w.g.
mm	mm		
65	3.75	504	9
60	3.75	550	9
60	3.35	680	10
50	3.75	644	9
50	3.35	812	10
50	3.00	952	11
45	3.35	924	10
45	3.00	1060	11
40	3.35	980	10
40	3.00	1200	11
40	2.65	1596	12
40	2.36	1960	13
30	3.00	1512	11
30	2.65	1848	12
30	2.36	2324	13
30	2.00	3000	14
25	3.35	1540	10
25	3.00	1750	11
25	2.65	2282	12
25	2.00	3800	14
20	3.00	2300	11
20	2.65	2898	12



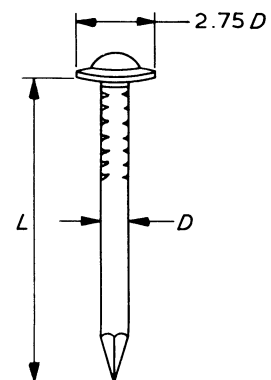
**Table 4. Dimensions and approximate count of extra large head felt nails**

Length <i>L</i>	Shank diameter <i>D</i>	Approx. no. of nails per kg	Nearest former s.w.g.
mm	mm		
25	3.35	1296	10
25	3.00	1636	11
20	3.35	1848	10
20	3.00	2130	11
15	3.35	1840	10
15	3.00	2283	11



**Table 5. Dimensions and approximate count of nipple head roofing nails**

Length <i>L</i>	Shank diameter <i>D</i>	Approx. no. of nails per kg	Nearest former s.w.g.
mm	mm		
65	5.00	316	6
50	4.50	390	7
50	3.75	594	9
45	3.75	682	9
25	3.75	1200	9
25	3.35	1410	10

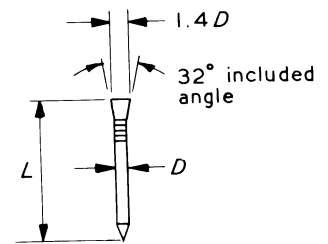




**Table 6. Dimensions and approximate count of panel pins**

Length <i>L</i>	Shank diameter <i>D</i>	Approx. no. of nails per kg
mm	mm	
25	1.60	6 550
20	1.60	8 790
15	1.60	11 800

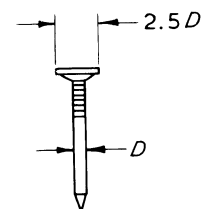
Nearest former s.w.g.
16
16
16



**Table 7. Dimensions and approximate count of gimp pins**

Length <i>L</i>	Shank diameter <i>D</i>	Approx. no. of nails per kg
mm	mm	
25	1.60	5936
20	1.60	7588
15	1.60	9600

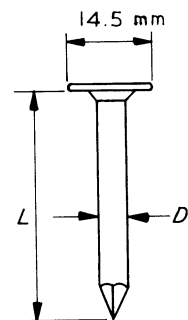
Nearest former s.w.g.
16
16
16



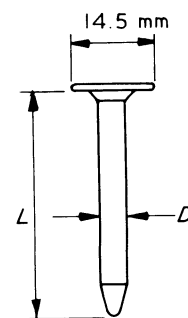
**Table 8. Dimensions and approximate count of tile pegs**

Length <i>L</i>	Shank diameter <i>D</i>	Approx. no. of nails per kg
mm	mm	
40	5.00	450
40	4.50	490
30	5.00	545
30	4.50	600

Nearest former s.w.g.
6
7
6
7



Sharp point



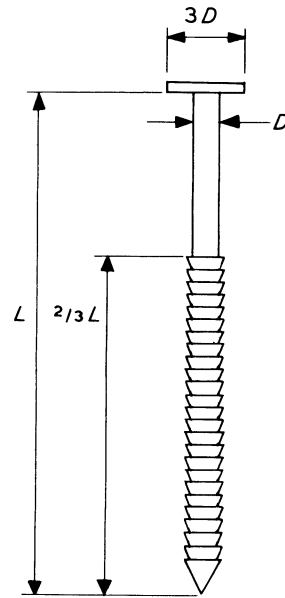
Round point

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**Table 9. Dimensions and approximate count of annular ringed shank flat head nails**

Length <i>L</i>	Shank diameter <i>D</i>	Approx. no. of nails per kg
mm	mm	
75	4.00	345
65	4.00	440
50	3.35	812
40	3.35	980
40	3.00	1200
25	2.65	2280

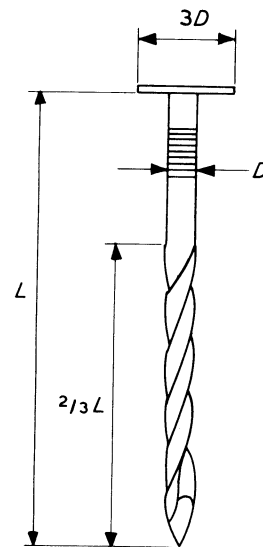
Nearest former s.w.g.
8
8
10
10
11
12



**Table 10. Dimensions and approximate count of helical threaded shank flat head nails**

Length <i>L</i>	Shank diameter <i>D</i>	Approx. no. of nails per kg
mm	mm	
75	4.00	345
65	4.00	440
50	3.35	812
40	3.35	980
40	3.00	1200
25	2.65	2280

Nearest former s.w.g.
8
8
10
10
11
12



NOTE. This type of nail is also available with a countersunk head.

## BSI publication referred to in this standard

This standard makes reference to the following British Standard:

BS 1475 Wrought aluminium and aluminium alloys for general engineering purposes – wire

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